

## ABSTRACT OF THE INVENTION

A method and an apparatus thereof for monitoring leakage of process cooling water (PCW) in a furnace. In the method, a bellows used to deliver the process cooling water is covered by a protecting tubing, so as to protect the bellows from being corroded by the process environment and to control the flow direction of the cooling water leaking from the bellows, thus avoiding the cooling water sprinkling. In addition, a tray is installed under the bellows to receive the leaking cooling water, so as to prevent the leaking cooling water from spilling on wafers. Besides, sensors are 10 installed in the tray to send a signal while the cooling water falling on the tray.